

REMARKS

I. Introduction

In response to the Office Action dated July 17, 2006, Applicants have amended claims 1, 2, 4, 6, 9, 12, 15, 19, 22, 25, 28, 32, 35, 38, and 41 to address the Examiner's objections and rejections under 35 U.S.C. § 112 by more particularly pointing out and distinctly claiming the subject matter of the invention. No new matter has been added.

Applicants note with appreciation the indication that claims 5 – 13, 18 – 29, and 31 – 42 contain allowable subject matter. In view of the foregoing amendments and the following remarks, Applicants respectfully submit that all pending claims are in condition for allowance.

II. Claim Rejections Under 35 U.S.C. § 112

Claims 1 – 42 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims have been amended to overcome this rejection. Accordingly, withdrawal of this rejection is respectfully requested.

III. Claim Rejections Under 35 U.S.C. § 103

Claim 1 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent Publication No. 2004/0103251 to Alsup. Claims 2 – 4, 17, and 30 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Alsup in view of U.S. Patent No. 6,233,195 to Yamazaki. Applicants traverse these rejections for at least the following reasons.

Claim 1 recites, among other things, a semiconductor device comprising a plurality of page memory units obtained by partitioning a second memory unit which is accessible by the processor at a speed higher than a speed at which a first memory unit is accessible such that each

page memory unit has a storage capacity of several kilobytes. At least this feature is not disclosed or suggested by Alsup.

In accordance with one embodiment of the invention, a reduction in circuit scale may be achieved by composing page memory units each having a storage capacity of about several kilobytes. Each page memory unit has a storage capacity larger than that of a conventional line, which has a storage capacity of only about several tens of bytes. Accordingly, it is possible to store information in a unit of program execution that can be managed by an operating system. This allows easier design of memory replacement scheduling in accordance with the process flow of a program (*see, e.g.*, Specification at page 4, line 19 – page 5, line 3).

Alsup appears to disclose a microprocessor comprising an L1 cache memory and an L2 cache memory having different sizes. However, the storage capacity of the cache line disclosed by Alsup is “a number of bytes” (*see*, paragraph [0033]). This is different from the storage capacity recited in claim 1, which is several kilobytes. Accordingly, the invention of Alsup is merely an example of the conventional cache line. As such, it is impossible to store information in a unit of program execution that can be managed by an operating system. Thus, Alsup clearly fails to disclose or suggest every feature recited in claim 1.

Accordingly, as each and every limitation must be disclosed or suggested by the prior art references in order to establish a *prima facie* case of obviousness (MPEP § 2143.03), and Alsup fails to disclose or suggest at least the features recited above, it is respectfully submitted that independent claim 1 is patentable over the cited reference.

Claims 2 – 42 depend from claim 1. Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness*

International Inc. v. Simplimatic Engineering Co., 819 F.2d at 1100, 1108 (Fed. Cir. 1987).

Accordingly, as independent claim 1 is patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination.

IV. Conclusion

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited.

If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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